

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

PLR WORLDWIDE SALES LIMITED,
Petitioner

v.

FLIP PHONE GAMES, INC.,
Patent Owner

IPR No. IPR2024-00132

Patent No. 9,731,202

**DECLARATION OF DR. ROBERT AKL, D.SC.
IN SUPPORT OF PATENT OWNER'S RESPONSE**

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I, Robert Akl, declare and state as follows:

I. Introduction

1. I am over the age of 18 and am competent to make this Declaration. I have personal knowledge, or have developed knowledge, of the matters set forth herein based upon my education, training, and/or experience. If called upon to do so, I would testify competently thereto.

2. I have been retained by counsel for Patent Owner Flip Phone Games Inc. (“Patent Owner” or “FPG”) as an expert witness in the above matter. I am submitting this Declaration to address the validity of claims 1-9 in U.S. Patent No. 9,731,202 (“the ’202 Patent”). For the purposes of this Declaration, I have not been asked to opine on any other issues not addressed below.

3. My opinions are based on my years of education, research and experience, as well as my investigation and study of relevant materials, including those identified in this Declaration. I may rely upon these materials, my knowledge and experience, and/or additional materials in forming any necessary opinions. Further, I may also consider additional documents and information to rebut arguments raised by the Petitioner PLR Worldwide Sales Limited (“Petitioner” or “Playrix”). I reserve any right that I may have to supplement this Declaration if further information becomes available or if I am asked to consider additional information. Furthermore, I reserve any right that I may have to consider and

comment on any additional expert statements or testimony of Playrix's expert(s) in this matter.

4. My analysis of the materials produced in this investigation is ongoing and I will continue to review any new material as it is provided. This Declaration represents only those opinions I have formed to date. I reserve the right to revise, supplement, and/or amend my opinions stated herein based on new information and on my continuing analysis of the materials already provided.

II. Background and Qualifications

5. I have studied, taught, played, and researched video games, including mobile games, through my studies and academic career in technologies used in games, both from the client-server and networking end, and related to game design and game play. I also have knowledge and experience in the fields of mobile communication systems, client-server systems, and mobile gaming systems for around 30 years. I have summarized in this section my educational background, work experience, and other relevant qualifications. A true and accurate copy of my *curriculum vitae* is attached as Ex. 2005.

6. I earned my Bachelor of Science degrees in Electrical Engineering and Computer Science *summa cum laude* with a grade point average of 4.0/4.0 and a ranking of first in my undergraduate class from Washington University in St. Louis in 1994. In 1996, I earned my Master of Science degree in Electrical Engineering

from Washington University in St. Louis with a grade point average of 4.0/4.0. I earned my Doctor of Science in Electrical Engineering from Washington University in St. Louis in 2000, again with a grade point average of 4.0/4.0, with my dissertation being on “Cell Design to Maximize Capacity in Cellular Code Division Multiple Access (CDMA) Networks.”

7. After obtaining my Doctor of Science degree, I worked as a Senior Systems Engineer at Comspace Corporation from October of 2000 to December of 2001. At Comspace, I designed and developed advanced data coding and modulation methods for improving the reliability and increasing the available data rates for cellular communications. I coded and simulated different encoding schemes (including Turbo coding, Viterbi decoding, trellis coded modulation, and Reed-Muller codes) and modulation techniques using amplitude and phase characteristics and multi-level star constellations.

8. In January of 2002, I joined the faculty of the University of New Orleans in Louisiana as an Assistant Professor in the Department of Electrical Engineering. While in this position, I designed and taught two new courses called “Computer Systems Design I and II.” I also developed a Computer Engineering Curriculum with a strong hardware-design emphasis, formed a wireless research group, and advised graduate and undergraduate students.

9. In September of 2002, I received an appointment as an Assistant Professor in the Department of Computer Science and Engineering at the University of North Texas (UNT), in Denton, Texas. In May of 2008, I became a tenured Associate Professor in the Department of Computer Science and Engineering. Between January 2015 and August 2022, I was appointed to Associate Chair of Graduate Studies in the Department of Computer Science and Engineering. In May of 2023, I was promoted to the rank of Professor.

10. I am also the director of the Wireless Sensor Lab (“WiSL”) at UNT. I am a member of the Center for Information and Cyber Security (CICS). It is the only program in the U.S. to be federally certified by the National Security Agency as a Center of Academic Excellence in Information Assurance Education and Research *and* Cyber Defense Research. Several of my research projects are funded by industry and the National Science Foundation and published in *IEEE* conference proceedings and journals.

11. In addition to advising and mentoring students at UNT, I was asked to join the faculty of the University of Arkansas in Little Rock as an Adjunct Assistant Professor from 2004 to 2008 in order to supervise the research of two Ph.D. graduate students who were doing research in wireless communications. At UNT, I have advised and supervised more than 250 undergraduate and graduate students, several of whom received a master’s or doctorate degree under my guidance.

12. Starting in 2005, I began to research and programming robotics and games at UNT. Between 2005 and 2017, I received over a million dollars in funding from the State of Texas, Texas Higher Education Coordination Board, the National Science Foundation, and industry to design and conduct robotics and video game (e.g., Xbox, PC, mobile games) programming summer camps for middle and high school students at UNT. By using gaming as the backdrop, I have taught participants coding and programming principles and an understanding of the role of physics and mathematics in video game design. For this work, I received the *IEEE* Professionalism Award and the Tech Titan of the Future award. As another example, I have taught video game design and programming to former students who later designed and worked on the Call of Duty video game franchise, which is a very successful video game franchise across multiple platforms including PC, Xbox, and mobile devices. As another example, I have published articles related to video game design and programming and the challenges of attracting underrepresented minorities to that field. As another example, I have developed courses in video game programming and design which I have taught at UNT and in my summer camp program. I have also been a “gamer” for most of my life.

13. In addition to my academic work, I have remained active in the communication industry through my consulting work. In 2002, I consulted for Input/Output Inc. and designed and implemented algorithms for optimizing the

frequency selection process used by sonar for scanning the bottom of the ocean. In 2004, I worked with Allegiant Integrated Solutions in Ft. Worth, Texas to design and develop an integrated set of tools for fast deployment of wireless networks, using the 802.11 standard. Among other features, these tools optimize the placement of Access Points and determine their respective channel allocations to minimize interference and maximize capacity. I also assisted the Collin County Sheriff's Office (Texas) in a double homicide investigation, analyzing cellular record data to determine user location.

14. I have authored and co-authored over 100 journal publications, conference proceedings, technical papers, book chapters, and technical presentations in a broad array of communications-related technologies, including networking, wireless communication, and video games. I have also developed and taught over 100 courses related to communications and computer systems, including several courses on signals and systems, LTE, OFDM, VoIP, Wi-Fi (802.11), 802.15.4, Zigbee, wireless communication, communications systems, communication interfaces and standards, sensor networks, source coding and compression, network security, computer systems design, game and app design, and computer architecture. These courses have included introductory courses on communication networks and signals and systems, as well as more advanced courses on wireless communications.

A complete list of my publications and the courses I have developed and/or taught is also contained in my *curriculum vitae*.

15. My professional affiliations include services in various professional organizations and serving as a reviewer for a number of technical publications, journals, and conferences. I have also received a number of awards and recognitions, including the *IEEE* Professionalism Award (2008), UNT College of Engineering Outstanding Teacher Award (2008), and Tech Titan of the Future (2010) among others, which are listed in my *curriculum vitae*.

16. I have also served as an expert in certain legal proceedings. A list of cases in which I have testified at trial, hearing, or by deposition (including those during the past five years) is provided in my *curriculum vitae*. Over the years, I have been retained by both plaintiffs as well as defendants.

17. I am being compensated for my work in this case at my standard rate of \$895 per hour (plus reimbursement for expenses) in connection with my preparation of this declaration, as well as for each hour spent providing deposition or testimony. This compensation is not contingent upon my performance, the outcome of this case, or any issues involved in or related to this case. I have no financial interest in this matter.

III. Documents and Materials Considered

18. In preparing my opinions, I have reviewed the '202 Patent and its prosecution history and have also reviewed the other documents and materials cited herein and the materials listed below. When citing from these references, all emphasis is added unless otherwise noted.

Ex.	Description
1001	U.S. Patent No. 9,731,202
1002	File History for U.S. Patent No. 9,731,202
1003	Declaration of Dr. Jose Zagal
1005	US 2008/0102947 to Hays ("Hays")
1006	US 2007/0174490 to Choi ("Choi")
1007	US 7,698,178 to Chu ("Chu")
1008	US 2007/0088801 to Levkovitz ("Levkovitz")
1009	US 9,129,301 to van Datta ("van Datta")
1015	Mark Andrejevic, "Productive Play 2.0: The Logic of In-Game Advertising" in Media International Australia, Vol. 130, No. 1, pp. 66-76 (Feb. 2009)
1016	Ilya Vedrashko, Advertising in Computer Games (Doc. No. 123290221) [Master's Thesis, Mass. Inst. of Technology], DSpace@MIT
1017	Exit Games, In-Game Advertising Goes Mobile [Press Release] (Mar. 21, 2006)
1018	Jussi-Pekka Partanen, Mobile Gaming: A Framework for Evaluating the Industry 2000-2005 (2001)

19. My opinions are also based upon my education, training, research, knowledge, and personal and professional experience. I reserve the right to supplement or amend this Declaration in the event that I hereafter become aware of additional relevant information.

IV. Understanding of Legal Standards

20. I am not an attorney and have not been asked to offer an opinion on the law. I understand, however, that certain aspects of the law are relevant to my evaluation and opinions set forth herein. I have therefore been informed of and asked to apply the legal principles summarized below.

A. Priority Date

21. I understand that the “priority date” of a patent is the date on which it is filed. I further understand that a patent may be entitled to the filing date of an earlier-filed application or foreign patent filing. In this case I understand the ’202 Patent was filed on June 26, 2007.

B. Burden of Proof

22. I understand that Playrix as the Petitioner bears the burden of proof in this proceeding and that that burden is to establish by a preponderance of the evidence that the claims are invalid.

C. Claim Construction

23. I understand that the words of a claim are generally given their ordinary and customary meaning, which I understand is the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention, *i.e.*, as of the effective filing date of the patent application. I understand the person of ordinary skill in the art is deemed to read the claim term not only in the context of

the particular claim in which the disputed term appears, but in the context of the entire patent, including the specification and prosecution history. Additionally, I understand other extrinsic evidence external to the patent and prosecution history, such as dictionaries and treatises, may also be useful in determining the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention. I understand that such extrinsic evidence, however, is generally afforded less weight than intrinsic evidence in determining the meaning of claim terms, and overall is unlikely to result in a reliable interpretation of a patent claim scope unless considered in the context of the intrinsic evidence.

D. Obviousness Under 35 U.S.C. § 103

24. I understand that a claim is invalid if the invention recited in the claim would have been obvious to one of ordinary skill in the art at the time the invention was made. I understand this means that even if all the requirements of the claim cannot be found in a single prior art reference that would anticipate the claim, a person of ordinary skill in the field of the invention knowledgeable of the prior art would have come up with the claimed invention. In considering whether a claim is obvious, I have been asked to consider (a) the level of skill in the art at the time of the claimed invention, (b) the scope and content of the prior art, (c) any differences between the prior art and the claims of the patent-in-suit, and (d) any “secondary factors” tending to show non-obviousness of the claimed invention, including

commercial success, long-felt but unresolved need, failure of others, copying, praise by others, unexpected results, and simultaneous invention by others.

25. I understand that a claim composed of several elements is not proved obvious merely by demonstrating that each of its elements was independently known in the prior art. I also understand that obviousness should not be analyzed using the benefit of hindsight. Instead, it must be analyzed from the standpoint of what was known and understood by a POSITA at the time of the claimed invention. I further understand demonstrating that a modification to a reference or the combination of multiple references is obvious requires providing a reason for why a POSITA would modify a reference or combine multiple references and that reason must be supported with some rationale underpinning. Merely pointing out that two references are similar or in the same field of endeavor is not sufficient.

E. Secondary Considerations of Non-Obviousness

26. I understand that in determining whether the claims are obvious I must also consider certain factors that may help determine that a particular concept was not obvious. These include practical factors relating to the concept, including (1) commercial success, (2) a long-felt need for a solution to the problem facing the inventors, (3) whether others tried and failed to solve the problem, (4) whether others copied the claimed invention, (5) whether the invention achieved unexpected results,

- (6) whether the prior art teaches away from combining certain known elements, and
- (7) whether others in the field praised the invention.

V. Level of Ordinary Skill

27. I understand there is a concept in patent law known as a person having ordinary skill in the art (POSITA). I understand that this concept refers to a person who is trained in the relevant technical field of a patent without possessing extraordinary or otherwise exceptional skill. I further understand that factors such as the education level of those working in the field, the sophistication of the technology, the types of problems encountered in the art, prior art solutions to those problems, and the speed at which innovations are made may help establish the level of skill in the art.

28. Taking these factors into consideration, in my opinion, with regard to the '202 Patent, a person of ordinary skill in the art would have a bachelor's degree in electrical engineering, computer engineering, computer science, or a similar field, along with one to two years of experience developing or programming video games or video game systems, or similar types of computer systems. Additional education might substitute for some of the experience, and additional substantial experience might substitute for some of the educational background.

29. I understand that Petitioner asserts that a person of ordinary skill in the art would have "an undergraduate degree in game design or development, computer

science, computer engineering, or a related field, with at least two years of experience working with computer gaming systems or software application development.” Petition at 2.

30. Based at least on my educational and work experience, I was at least a person of ordinary skill in the art as of the effective filing date of the ’202 Patent (June 26, 2007) under either party’s proposal. And while I note that my qualifications and experience exceed this definition of a person of ordinary skill of the art, in arriving at the conclusions in this Declaration, I have considered the issues from the perspective of a person of ordinary skill of the art at the relevant time.

31. Unless otherwise stated, I have applied this level of ordinary skill in the art for the purposes of this Declaration.

VI. Overview of the ’202 Patent

32. The ’202 Patent is entitled “Methods and systems for updating in-game content,” issued on August 15, 2017, and names Joshua Hartwell and Paul Bolten as co-inventors.

33. The ’202 Patent describes systems and methods for updating video-game content of a video game played on a mobile device and addresses shortcomings in the prior art. *See* ’202 Patent at Abstract. More specifically, the ’202 Patent describes a way of “updating in-game content on a mobile communication device”

based on specified criteria, which “may prolong user interest in a game for a mobile communication device.” ’202 Patent, 2:7–11.

34. The ’202 Patent explains that, at the time the ’202 Patent was filed “[m]any mobile communication devices (including cellular phones, PDAs, and other handheld devices capable of communicating with a server) [we]re capable of operating video games,” and, further, that “most [then-]current mobile communication devices c[a]me equipped with one or more games at the time of purchase, and most [then-]modern mobile communication devices also allow[ed] users to download and/or purchase new games.” ’202 Patent, 1:12–18. “As a result, gaming on mobile communication devices has become a popular mode of entertainment in a mobile environment.” *Id.* at 1:24–26.

35. And, at the time the ’202 Patent was filed, video games on mobile phones had a limited life cycle. Game developers addressed loss of user interest by releasing new mobile games rather than updating existing mobile games. The ’202 Patent even recognizes that “[a]s game elements become increasingly familiar to players, the game may hold less surprises and/or no longer present a challenge to the user, at which point the user may stop playing that particular game in favor of others.” *Id.* at 1:29–32.

36. The ’202 Patent provides a novel solution to this problem, updating mobile game content based on specific factors associated with a mobile device such

that, for example, “a particular scene within the game may be rearranged so that the user has something new to look at or explore” or that “the updated content may comprise a new level within the game.” ’202 Patent, 4:31–45. The ’202 Patent explains that these updates “may prolong user interest in a game for a mobile communication device ...” (*id.* at 2:7–11) or allow a game to “sustain its popularity and be more profitable for the game creator than existing mobile communication device games.” *Id.* at 4:30–45.

37. The technology described and claimed by the ’202 Patent allowed carriers to update video-game content and promotions presented to customers by tailored gaming updates in lieu of replacing applications as a whole and hence, decreasing the bandwidth required by the phone.

VII. Background of the Technology

38. As of the priority date of the ’202 Patent (June 26, 2007), the claimed invention described above was non-obvious.

A. Mobile Game Development and Distribution Was Very Different in June 2007.

39. As of the June 26, 2007 priority date of the ’202 Patent, mobile phones and mobile gaming faced numerous limitations. Mobile phones of that era had limited storage capacity, limited processing capability, and much slower network connectivity. For example, the first generation iPhone would not be released until June 29, 2007—after the priority date of the ’202 Patent and after the application

that led to the '202 Patent was filed. And that first generation iPhone did not have a wireless broadband connection, and came with just 4, 8, or 16GB of data storage, much of which was used by the iOS operating system. Download speeds were also limited to 3 Mbps (Mega bits per second) via 3G. Due in part to these limitations, the first generation of the Apple Appstore would not be released for another year.

40. Thus, at the time of the priority date, mobile games existed in a very different form than we think of today. As of the June 26, 2007 priority date, mobile games were generally designed for only specific devices (e.g., specific models of phones) and were made available on specific game decks or offerings available through mobile device carriers. At the time, no systems existed to update mobile games via the data connection on the phone. Thus, once a game was released and installed on a mobile device, the developers did not develop new features or new game levels for that existing game. Rather a developer may develop a new version of the game, which would be installed on later sold versions of the mobile device.

41. Because each wireless provider managed their own games and mobile games were not standardized, only a limited number of mobile games were available. And the available games had a much shorter lifecycle as old games were removed to make space for new games given storage and capacity limitations.

B. Hardware Limitations in Mobile Devices as of June 2007 Limited the Applicability of Any Developments in Console Games.

42. Video games in non-mobile contexts, e.g., on consoles, did not face these same limitations. At the time of invention of the '202 Patent, console games such as the Microsoft Xbox or the Sony PlayStation included large storage, fast processing, and wired broadband data connections. These games could be updated relatively easily and game engines were available that provided architecture for loading new executable software that was absent from the mobile device industry. Thus, consoles or PCs offered more extensive gaming experiences while mobile phones were able to access limited browser-based games or purchase applications offered by a service provider. As explained further herein, these browser-based games, such as those described in Hays (Ex. 1005) and Levkovitz (Ex. 1008) operated in a distinct manner from the claims of the '202 Patent and required different development and programming considerations.

43. In contrast, due to the much more limited processing, storage, and data bandwidth capabilities of mobile devices, the only option available for mobile games, at that time, was to download an entire new game. But downloading even a second copy of an entire game was not practical. Downloads for the games were large, data storage space on the mobile devices was extremely limited, and available bandwidth was too low to efficiently download a full game across the 3G mobile network.

44. These limitations in mobile technology at the time, combined with the short lifecycle of games, encouraged game developers to create new game titles rather than creating updates to a game itself, like the claimed invention of the '202 Patent. Instead, games were purchased only once and at a higher price point than they are offered at today, ranging in price from \$4.99 to \$9.99.

C. The Claimed Invention of the '202 Patent Provides “updated video-game content to a mobile communication device for use in a mobile video game”

45. The claimed invention of '202 Patent solves the problems above by providing “updated video-game content to a mobile communication device for use in a mobile video game.” The invention of the '202 Patent allows game programmers and developers to provide updates to games—i.e., updated video-game content that is usable when the video game operates on the communications device based on one of the factors recited in the claims. Moreover, the claimed invention allows this to be done without re-downloading the entire contents of the game. This technology was not offered by service providers or device manufacturers at the time of invention.

D. Ad-Servers Available in the Mid-2000s Did Not Provide Updates to Game Functionality or Levels.

46. In June 2007, ad servers were available to provide in-game advertising to PC and console games. These ad servers provided what were essentially pop-up ads within games, but did not provide updated video-game content for game play.

Nor did such advertising update the functionality or features of a game. Rather, in-game advertising allowed game developers the ability to monetize views by game players.

47. In June 2007, ad servers were available for console and desktop games, and took advantage of the high-speed bandwidth available to those gaming platforms to transmit advertising. However, ad servers were not available for use in mobile games, because these devices still had limited bandwidth available through cellular data connections, which did not offer mobile broadband at that time. Indeed, as the name suggests, browser-based games that utilize Wireless Application Protocol (WAP) operated via a mobile web browser. These games were not installed on or downloaded to the mobile phone itself, and only accessed games via cellular data. In contrast, applications were downloaded to a specific mobile device and were developed for a given type of phone to perform a specific function or set of functions. This download presented a barrier given the processing, storage, and network constraints of mobile devices at the time.

48. Given that WAP and web-based games are not downloaded and instead accessed via the web, mobile game developers could more easily develop or share content. Ad servers, like each of the prior art references Petitioner relies on, were used in the WAP context.

49. But these ad server systems could not work with mobile devices in mid-2007 due to the limitations of mobile networks at the time. These technology limitations of applications prevented ad servers (and any web-based application) from being implemented on then existing mobile devices. These were two distinct avenues for developing mobile games at the time of invention.

50. The claimed invention of the '202 Patent solved this problem by allowing updated video-game content to be sent to a mobile gaming application, without re-downloading the entire game.

VIII. Non-Obviousness of the '202 Patent

A. Hays does not render any of the Challenged Claims obvious.

1) Claim 1

a) Hays does not teach or suggest the use of “checking what updated video-game content to send based on one of the [claimed] factors”

51. Hays does not teach or suggest claim 1 because Hays does not describe a “checking” step using any of the factors recited in claim 1[b]. '202 Patent, claim 1[b] (“checking what updated video-game content to send based on one of the factors including a type of the mobile communication device, a telecom service associated with the mobile communication device, and a service provider of the telecom service”).

52. Hays describes a system for matching and weighting advertisements. Ex. 1005, [0040]-[0043]. The “advertising matching and weighting system” of Hays “calculate[s] the weight of each advertisement based on several factors including campaign goal and completion data from the advertisement serving database 122 and information regarding the specific client type from the advertisement recipient database 120.” *Id.* at [0043]. The system “then selects one or more advertisements from the weighted advertisement set, where the probability of an advertisement being selected is directly derived from the advertisements assigned weight, relative to other advertisements in the set.” *Id.* Once the advertisements are selected, they are “sent back to the requesting advertising request handler 210 and transmitted back to the advertisement recipient client for display.” *Id.*

53. As provided above, Hays describes that the ads are matched and weighted based on the campaign goal and competition data. A POSITA would understand that, in this advertisement matching and weighting system of Hays, advertisements are selected or checked based on the advertisement itself as opposed to any information about the client device or service provider. A POSITA would find this distinct from the factors recited in claim 1[b] which only relate to the client device or service provider.

54. Further, a POSITA would understand that a weighting system is distinct from the recited “checking” step. A POSITA would understand that the checking

step is a compatibility determination. In contrast, the weighting scheme of Hays is prioritizing which ad to send, not checking compatibility of the client mobile device to determine which ad is capable of being sent.

55. This is confirmed by the description in paragraphs [0044] and [0045] of Hays, which describes ad targeting. Hays describes serving ads that are targeted based on “demographic information.” Ex. 1005, [0044] (“[A]dvertising can be further targeted based on specific demographic characteristics of a game player,” “demographic information about a game player collected via the use of an IP address”).

56. I disagree with Dr. Zagal that, merely since it may be the case that “[d]ifferent service providers have different ranges of IP address,” this teaches the “checking” step, which requires checking based on specific factors, none of which are a range of IP addresses. *See* claim 1 (“on one of the factors including a type of the mobile communication device, a telecom service associated with the mobile communication device, and a service provider of the telecom service”). Even if Hays collects information about IP addresses, Hays does not describe “checking” whether information is available to be sent to the client device on this basis. A POSITA would understand that Hays’s system weighs the advertisements and assigns a priority to the advertisements, which is distinct from the “checking” step as claimed in the ’202 Patent.

57. Dr. Zagal also asserts that “it would have been obvious for a POSITA to combine Hays’s teachings of weighing advertisements based on the type of game console (*id.*, ¶43) and Hays’s teachings of the various mobile communication devices that constitute game consoles (*id.*, ¶51).” Ex. 1003, ¶ 104. I disagree. A POSITA at the time of the invention would have understood that games on mobile devices operated differently than game consoles at least because of the technical limitations of mobile devices in June 2007, which I summarize in Section VII above. And a POSITA would have understood that mobile devices at the time each had different software platforms. A POSITA would not have been motivated to apply weighting of advertisements to the distinct platforms that were specific to the mobile device and mobile provider.

58. Instead, a POSITA would have understood that each mobile device and mobile provider had different platforms for content. A POSITA would not have sought to send the same content and assign a weight across various devices or providers. Instead, a checking step would need to be performed, as claimed in the ’202 Patent. But this is absent from Hays. The operations of the “advertisement matching and weighting system” are distinct from the claimed “checking” step. Nor would a POSITA have been motivated to substitute the weighting system of Hays into mobile communications devices, because such a substitution was not technically feasible. And contrary to Dr. Zagal’s statements (Ex. 1003, ¶ 104), a POSITA would

not have had a reasonable expectation of success in combining these teachings of Hays as the mobile device platforms were each distinct at the time.

59. Instead, a POSITA would have understood that the updated video game content had to be specifically designed for each mobile device type and each service provider. Thus, a POSITA would not have been motivated to modify the weighting system of Hays to implement the system in mobile devices at this time.

60. Hays does not render claim 1 obvious, and thus, for the same reasons, does not render claims 2-9 obvious. Claims 4-6 are also not obvious for additional reasons described below.

b) Hays does not teach or suggest the use of “updated video-game content” in “a mobile video game” “that already exists on the mobile communication device” “when the video game operates on the communications device.”

61. Claim 1 requires “providing updated video-game content to a mobile communication device ***for use*** in a mobile video game” (claim 1[pre]), “the updated video-game content being ***usable in the video game*** that already exists on the mobile communication device” (claim 1[a]), and “the video-game content ***being usable when the video game operates*** on the communications device” (claim 1[c]). Hays does not describe “updated video-game content” that is used “in a mobile video game” as required by these limitations of claim 1.

62. Hays describes “[a]n advertisement delivery scheme and associated facility provide targeted advertisements for multiple video games without

advertisers having to specify specific game titles in which they would like their advertisements placed.” Ex. 1005, Abstract. The invention of Hays purports to improve upon prior systems in which “advertisers who wished to advertise in video games were limited to selecting specific individual game titles for presenting their advertisements.” Ex. 1005, [0017]; *see also id.* (“ . . . allow advertisers to deliver their campaign messages to specific audiences they wish to target across one or multiple game titles played across multiple platforms (e.g., PC, console, mobile, etc.) without being limited to delivering their campaign to only a single specific game title.”).

63. Hays does so by serving advertisements as “commercial-like intermissions” or “as texture maps or other graphical displays (e.g., animations, video, etc.) on pre-designated geometry within the game.” Ex. 1005, [0018] (“the advertisement delivery scheme and associated facility present advertisements as texture maps or other graphical displays (e.g., animations, video, etc.) on pre-designated geometry within the game, such as billboards, storefront signs, panel trucks, Jumbotron screens in a sports stadium, posters on walls, T-shirts on a game character, items used by game characters (e.g., a brand name soft drink or energy bar), and so on.”).

64. A POSITA would understand that these advertisements are not “for use” or “usable” in the mobile video game and are instead agnostic to the game

environment and for use on external sites or by external ad providers. The advertisements are merely graphical “skins” that are rendered on content or items that are already present and shipped with the game, not updated video-game content. The advertisements do not relate to any specific interactions or uses in the game. And the advertisements are not related to any in-game purchases. Indeed, Hays explicitly provides that the advertisements are “not limited to a single specific game title” and instead are presented “across one or multiple game titles played across multiple platforms.” Ex. 1005, [0017]; *see also id.*, Abstract. A POSITA would not understand these disclosures as teaching updated video-game content being used in the game because Hays teaches the opposite.

65. Additionally, I have reviewed the prosecution history of the ’202 Patent. It is my opinion that a POSITA would find Hays analogous to prior art that the applicant argued over and overcame during prosecution based on the same claim language concerning updated content for use or usable in the video game.

66. More specifically, the applicant overcame a rejection based on U.S. Pub. No. 2004/0127279 to Gatto (“Gatto”). The applicant distinguished the claimed invention of the ’202 Patent and Gatto’s items available for download via a hyperlink because Gatto’s items were not usable in the game. Ex. 1002 at 188 (“There is no indication that these promotional items are ‘usable in the video game.’ Indeed, it would not make sense for an email to provide hyperlinks for content that is usable

in the email itself.”); *id.* at 189 (“the Examiner fails to address the remaining claim language of this element-namely, whether this content is ‘usable in the video game that already exists on the mobile communication device.’ A close reading of Gatto reveals that the ‘hyperlinks to download promotional items’ are, in fact, not usable in the so-called video game.”).

67. During prosecution, the Applicant clearly distinguished the “hyperlink” in Gatto from the claimed “updated video-game content” and “content that would be ‘usable in’ the email ticket or a ‘video game’ itself, as opposed to a separate application program.” *Id.* at 166. The Applicant explained that Gatto “does not teach or suggest any updated content that is ‘useable in’ a video game,” (*id.* at 142) and, instead, “[t]he available hyperlink ... causes the download of an entirely separate program or Internet page.” *Id.* The examiner agreed and withdrew that portion of the rejection based upon these arguments.

68. A POSITA would understand that hyperlinks are akin to data provided by an advertisement server and distinct from updating video game content for use in a mobile video game that already exists on the mobile communication device. This is consistent with my description of the state of the art as described above. Indeed, a POSITA would have understood the technical distinctions between browser-based games and advertisements provided via a server and gaming applications that are downloaded on a mobile device.

69. Hays describes that “[w]hen a game is played at a player’s gaming device (e.g., computer or game console) that is connected to an advertisement server (e.g., *via the Internet or another connection*), the client library functions associated with the game application may pull media data from the advertisement server and pass them on to the game code, so that specific advertisements may be presented in the appropriate available ad units at the appropriate time during game play.” Ex. 1005, [0021]; *see also id.* at [0032] (“The advertisement recipient client 104 may include a game playing device 126 (e.g., a console, computer, portable game device, etc.) on which a game application 128 executes. The game playing device 126 may request and receive advertisements from the advertisement management service system 108 and may be configured to establish communication via a *communication link, such as the Internet 129*.”). And Hays confirms that “representative computer displays or web pages” that “may be implemented in C++ or as web pages under XML (Extensible Markup Language), HTML (HyperTextMarkup Language) or any other Scripts or methods of creating displayable data, such as the Wireless Access Protocol (“WAP”).” *Id.* at [0103].

70. Thus, a POSITA reading Hays would understand that Hays discloses a browser-based ad server, which operates similar to the hyperlink system provided by Gatto in that it provides a link between an “ad unit” and a network address at which display data for that ad unit is stored. Similarly, the hyperlink system of Gatto

provided a link to data stored remotely and the Applicant distinguished Gatto on that basis during prosecution.

71. The additional paragraphs of Hays to which Petitioner and Dr. Zagal cite do not change this understanding. *See* Ex. 1005, [0019] (“available ad units may be interactive within the game (e.g., a game character eating a brand name energy bar to boost her power in the game, a brand-related “mini game” presented between levels, a click-through advertisement, etc.) and may bring aspects of the real world into the game (e.g., a player can enter a code from a product to provide advantages in the game).”), [0021] (“the client library functions associated with the game application may pull media data from the advertisement server and pass them on to the game code, so that specific advertisements may be presented in the appropriate available ad units at the appropriate time during game play”), [0079] (“In some embodiments, the advertisement management service system may send bots or electronic agents into the game as advertising units or real characters in the game, which advertise or promote a product (e.g., a game character may move around a screen holding a can of Pepsi and ask player if they would like a drink).”). A POSITA would understand that these are just ways in which the advertisements can be displayed or presented, e.g., the can acts as a skin on which “Pepsi” is displayed. Hays describes the can as an ad unit, which is “pre-designated geometry within the game” (Hays, [0018]) on which the skin of the branded Pepsi is displayed. Hays

never describes altering the functionality of the game based on an ad unit, e.g., Hays does not describe that additional functionality is included or functionality is modified based on the inclusion of an ad unit.

72. Moreover, it is the advertisement itself that Petitioner alleges is the “updated video-game content.” But as shown in the excerpts of Hays above, the ad is not usable in the video game – only the ad unit or object. In the example above, the can may be used in the game, but not the skin on the can that displays the Pepsi brand. Thus, a POSITA would know that the advertisements are served in the same manner and that the advertisements themselves (e.g., the Pepsi brand) are not “for use” in the video game, rather it is the “ad unit” (e.g., the can) on which the advertisement is displayed that is usable, but the ad unit itself is agnostic as to the advertisement displayed, if any. In other words, the game operates in the same way whether the can is blank or says Pepsi, and similarly the user does not experience any differences in the game based on the Pepsi skin being applied to the can.

73. Further, Hays only describes sending content that is not “updated video-game content.” Hays provides that the ads are presented on “pre-designated geometry within the game” which are shipped with the game. Ex. 1005, [0018], [0019] (“When a game is shipped, it may have a fixed set of available ad units grouped into Zones (typically delineated by game levels or areas of play).”). The soda can “ad unit” that is shipped with the game is fixed and pre-designated

regardless of whether it displays a Pepsi logo, a generic logo, or no logo at all. The soda can—the item itself—may be usable regardless of the logo or graphic rendered, but the alleged updated video-game content (the Pepsi logo) is not used or usable in the game.

74. Neither Petitioner nor its expert provides any analysis or explanation of how Hays might be modified under the knowledge of one of skill in the art to show how the ads could be “usable” in the game, nor how browser-based advertisement server method could be applied to an application that “already exists on the mobile communication device.” Nor could they, as Hays has claimed to solve a distinct problem in which its ads are agnostic to the gaming environment, instead of being designed “for use” in the game. A POSITA would, thus, not be motivated to modify Hays’s ad server as Hays provides a different solution that teaches away from serving ads or any other content to be used in the video game.

2) Claim 4

a) Hays does not teach or suggest “the step of sending information to the mobile communication device as part of the updated content, the information providing an in-game placement location associated with the updated video-game content.”

75. Hays’s ad server describes providing advertisements via “available ad units.” *See, e.g.*, Ex. 1005, [0073]. Hays describes the “ad units” as “spaces” or “pre-designated geometry within the game, such as billboards, storefront signs, panel

trucks, Jumbotron screens in a sports stadium, posters on walls, T-shirts on a game character, items used by game characters (e.g., a brand name soft drink or energy bar), and so on.” Ex. 1005, [0018].

76. Petitioner and Dr. Zagal assert that these “available ad units” are “in-game placement location[s].” I disagree. In doing so, Petitioner and Dr. Zagal ignore the remaining language specifically, “further comprising the step of ***sending information to the mobile communication device as part of the updated content***, the information providing an in-game placement location associated with the updated video-game content.” Hays does not disclose this aspect of the claim.

77. Rather, Hays describes that “the advertisement recipient client 104 requests advertisements for delivery to one or more available ad units within the client software application.” Ex. 1005, [0040]. And the system of Hays “may include handling initial connections, providing requested lists of advertisements for specific available ad units, serving media, etc.” *Id.* at [0029]. Hays describes ad units that are specifically available or “standardized”; the ad units may be offered “regardless of [the ad unit’s] location.” *Id.* at [0073].

78. From a plain reading of Hays, a POSITA would understand that these ad units are “standardized” and provided “regardless of [their] location.” *Id.* at [0073]. A POSITA would, thus, understand that the ad units are sent without any location information. Further, Hays does not describe “sending information to the

mobile communication device as part of the updated content, the information providing an in-game placement location....”

79. Dr. Zagal asserts “that a POSITA would have also found it obvious to send the specific ad unit (i.e. the claimed “in-game placement location”) with the advertisement sent to the mobile communication device, because a POSITA would be motivated to provide a mechanism to inform the game running on the device where to place the advertisement, as that would fulfill the contractual obligations to the advertiser.” Ex. 1003, ¶ 115. However, I disagree because Hays teaches against such a modification.

80. Hays describes serving advertisements via ad units in a way to reach the broadest audience with standardized placements of the ad units in predesignated locations. Because the ad units are predesignated, a POSITA would understand that Hays does not send location information with the ads. Nor would a POSITA modify Hays to include such functionality since Hays expressly states that its advertisements are broadly distributed to standard locations, i.e., “ad units.” Thus, a POSITA would not have been motivated to do so nor expected a such a combination to succeed.

3) Claim 5

a) Hays does not teach or suggest “the step of tracking what has been uploaded to the mobile communication device.”

81. Hays discloses that “the advertisement recipient client 104 begins by establishing or joining a session with the advertisement server 114.” Ex. 1005,

[0038]. Hays explains that “[e]stablishing this session may create a record in the active session database 124, which registers the game player as the first member of the new session and is used to track and record all communications and data sent to and received from the advertisement recipient client 104.” *Id.* Paragraph 45 reiterates that “[t]he data in the active session database 124 records the advertisements that have been delivered to a session.” Ex. 1005, [0045]. Hays’s tracking and recording is based on a session and not the content that has been uploaded to the mobile communications device, which may not be used and thus not tracked in a single session.

82. A POSITA would understand Hays’s disclosure of sessions is consistent with the technical limitations of a browser-based ad server. Hays’s ad server would not be able to track what has been uploaded to the mobile communications device because it is not application based. Instead, Hays’s ad server only sends or caches data in a particular session; it is not downloaded or uploaded to the mobile communication device. Hays, thus, tracks only what data has been seen by a user in a session rather than what data was uploaded to a device.

83. Additional paragraphs of Hays do not cure this deficiency. Paragraph 25, for example, describes tracking tied to an advertisement. Ex. 1005, [0025] (“services that track and audit the quality of presentation of the in-game advertisements,” including “advertisement impressions (which quantify the

presentation qualities—e.g., viewing angle, percent screen size, time on screen, etc.—of an advertisement as presented in any given instance).”). But a POSITA would understand that tracking a specific advertisement is distinct from tracking what has been uploaded to a specific “mobile communications device.”

84. The claimed “tracking” step is specific to content that was uploaded to a mobile communications device for use in a video game. *See* ’202 Patent, claim 5 (“further comprising the step of tracking what has been uploaded to the mobile communication device.”). In contrast, Hays’s browser-based tracking of a user’s session (rather than tracking the updated content that was uploaded to the device) does not meet the claim.

85. Further, a POSITA at the time of the invention would not have sought to apply Hays’s browser based tracking a mobile application for the reasons provided above with respect to claim 1.

4) Claim 6

a) Hays does not teach or suggest that “uploading updated video-game content to the mobile communication device further comprises displaying the video-game content within the game at a location based on user interaction.”

86. Hays does not describe “displaying the video-game content within the game at a location based on user interaction.”

87. First, Dr. Zagal asserts that Hays’s “mini games” satisfy this limitation. I disagree.

88. Hays describes “mini games” which “could be between levels, and could actually have levels of their own, so that later levels are more difficult than earlier ones.” Ex. 1005, [0078]. Hays also provides that “[e]ach of these mini games may be associated with one or more specific products, thereby performing an advertising function.” *Id.*

89. These “mini games” are not displayed “within the game at a location based on user interaction.” The mini games are not described as displayed at a location of user interaction. A POSITA would understand that advertisements may be displayed when a user completes a level, but not that the advertisement is displayed at a particular location based on user interaction. *See* Ex. 1004, [0080] (“provide available ad units that allow advertising at the beginning and end of a game and in between game levels (similar to commercials).”).

90. Dr. Zagal merely asserts that “[b]ecause these mini games do not appear until a level is completed, the location of the advertisement is based on user interaction, . . .” Ex. 1003, [0120]. Hays, however, does not disclose any location information for the mini game. And Dr. Zagal’s suggestion that an ad that is displayed after the user has completed a mini-game renders the claim element requiring “displaying the video-game content within the game at a location based on user interaction” meaningless because such an interpretation would encompass any content displayed after the user turns the game on.

91. Second, Dr. Zagal asserts that “Hays’s disclosure that advertisers can specify that an “[a]dvertisement stays static as long as the user is in the zone, per session,” meets this limitation. Ex. 1003, ¶ 122 (quoting Ex. 1005, [0062]). Again, I disagree.

92. For similar reasons as described above, Hays does not disclose this limitation. Hays only describes how long an advertisement remains static. A POSITA would understand that Hays displays advertisements based on a user interaction, but not at a particular location based on the user interaction. And, as explained with claim 4, the ad unit (e.g., the McDonald’s or Citibank ad) is standardized and not based on the user interaction.

93. Third, Dr. Zagal relies on “Hays’s disclosure that ‘the advertisement management service system may send bots or electronic agents into the game as advertising units or real characters in the game, which advertise or promote a product (e.g., a game character may move around a screen holding a can of Pepsi and ask player if they would like a drink).’” Ex. 1005, ¶ 123 (quoting Ex. 1005, [0079]). But I disagree that this discloses the elements of claim 6.

94. As with the other sections of Hays that Dr. Zagal cites, Hays at most describes displaying advertisements based on user interaction, but this does not disclose or suggest “displaying the video-game content within the game *at a location based on user interaction.*” The “bots or electronic agents” are the “ad units”

described above with respect to claim 4. And Hays's ad units are agnostic as to location. Thus, a POSITA would understand that these advertisements are not displayed "at a location *based on user interaction*," as is required by the claim.

95. As Hays provides, "a game character may move around a screen holding a can of Pepsi and ask player if they would like a drink" to promote Pepsi. At most, this discloses a "bot or electronic agent" as a non-party or game character that moves with a can with a Pepsi advertisement. Hays never describes that this "game character" is the user's character (the player). Thus, the actual location at which this Pepsi advertisement is displayed is not determined based on user interaction or any action by the player. This also does not disclose a location *based* on a user interaction because the movements of the bot are not connected to the player—the bot moves around the screen on its own. Rather, the user simply controls the movement of his or her own character.

B. Hays in view of Choi does not render any of the challenged claims obvious.

1) Claim 1

a) Hays does not teach or suggest "checking what updated video-game content to send based on one of the [claimed] factors. . . ."

96. Petitioner and Dr. Zagal contend that claim 1[b] and claim 8 are rendered obvious by Hays in view of Choi. I disagree. As I explained above, Hays fails to disclose claim 1 and Choi does not cure these deficiencies.

97. Choi is directed to “[m]ethods and systems for managing distribution and retrieval of data (for example advertising content and viewing statistics) and insertion of control logic (for example display of advertising content) into pre-existing mobile applications.” Ex. 1006, Abstract. More specifically, Choi describes methods for “ad targeting” and “ad selection.” Ex. 1006, [0083], [0089].

98. Petitioner and Dr. Zagal assert that Choi discloses the claimed “checking” step through Choi’s “ad targeting.” But Choi does not cure Hays’s deficiencies and fails to disclose the “checking” step for the same reasons.

99. Choi explains that its “ad targeting” is based on “user demographic and contextual information.” *See* Ex. 1006, [0083]. Choi also explains that personal identifying information and demographic information are known to carriers and that the carrier can be obtained via text message. *See id.*, [0084], [0086] (allowing an “instrumented application” to “communicate its carrier identity by sending a text message to an email address monitored by the ad server; the text message will be sent as an email, and the source address domain will identify the carrier.”).

100. Dr. Zagal (and Petitioner) assert that Choi teaches claim 1[b] because demographic information can be obtained from the carrier. Ex. 1003, ¶ 138 (citing Ex. 1005, [0096]). I disagree.

101. A POSITA would understand that Choi and Hays send advertisements based on demographic information. Demographic information is not recited in claim

1[b]. *See* claim 1 (“based on one of the factors including a type of the mobile communication device, a telecom service associated with the mobile communication device, and a service provider of the telecom service.”). At most, Choi describes that carrier information can be provided to Choi’s ad server. But neither Choi nor Hays describe how that information can be used by the ad server to perform the “checking” step of claim 1[b]. Both references only describe how to select advertisements based on demographic information. And, as described further below, a POSITA would not have been motivated to modify either of the Choi or Hays systems to arrive at the claimed invention.

102. Because the combination of Hays and Choi does not render obvious claim 1, the combination does not render obvious dependent claim 8 for the same reasons.

2) No Motivation to Modify or Combine with Choi, or Reasonable Expectation of Success

103. A POSITA would not have been motivated to modify Hays according to the teachings in Choi and arrive at the claimed invention, even if both references are both directed to advertisements.

104. More specifically, Petitioner and Dr. Zagal assert that “a POSITA would have been motivated to combine Hays with Choi’s teaching of ‘request[ing] demographic information from the carrier’ of the mobile communication device to use in the selection of advertisements, as well as Choi’s teaching of using ‘GPS

location information to request location-specific advertising.” Ex. 1003, ¶ 131 (quoting Ex. 1006, ¶¶84, 43). I disagree.

105. As I describe above, Hays discloses an ad server in which the server determines which advertisement to send based on a weight assigned to advertisements. Ex. 1005, [0043]. Hays discloses an “advertisement matching and weighting system” which “calculate[s] the weight of each advertisement based on several factors including campaign goal and completion data from the advertisement serving database 122 and information regarding the specific client type from the advertisement recipient database 120.” Ex. 1005, [0043]. As noted above, this is distinct from element 1(b)’s checking step. Hays does not recite any of the claimed factors, and Choi does not cure this deficiency.

106. Choi discloses an “ad targeting” system which determines what advertisement to send, but this is distinct from the system of Hays. Choi discloses “ad targeting” which “depends on collection of user demographic and contextual information.” Choi, however, does not provide a sufficient explanation of how to use the collected information that would allow a POSITA to modify Hays in light of Choi’s teachings – and the Petition does not even attempt to explain how a user would do so.

107. Further, Petitioner and Dr. Zagal assert that a “POSITA would be motivated to request and use such information as taught by Choi because of the

information's well-known benefits for targeted advertising without impinging privacy concerns and regulations." Ex. 1003, ¶ 132. But a POSITA would not have been motivated to incorporate the method of Choi into the ad server of Hays.

108. Hays already discloses a method for "ad targeting." The method disclosed in Hays targets advertisements based on time criterion, geographic criterion, or audience demographic. *See, e.g.* Ex. 1005, claim 22. More specifically, the method "allow[s] advertisers to deliver their campaign messages to specific audiences they wish to target across one or multiple game titles played across multiple platforms (e.g., PC, console, mobile, etc.) ***without being limited to delivering their campaign to only a single specific game title.***" Ex. 1005, [0017]. In contrast, the method of Choi relates to targeting advertising in ***a single*** game. A POSITA looking at Hays seeking to create an ad targeting method with a broad application, not specific to a particular gaming environment, would not have been motivated to employ the method of Choi, which is limited to a specific, pre-existing application.

109. Additionally, a POSITA would not have been motivated to incorporate Choi's use of demographic information into Hays, which Dr. Zagal nearly concedes. Ex. 1003, ¶ 133 ("However, Hays does not expressly describe how to obtain such predicted demographic information."). Hays discloses a method for weighting advertisements solely based on "campaign goal and completion data." Ex. 1005,

[0043]. Hays, thus, only teaches weighting on a quantitative value (campaign goal and completion). A POSITA looking at Hays would not have had a reasonable expectation of success in trying to incorporate the qualitative data obtained and tracked in Choi, because the intended purpose of Choi is targeting a single user versus a broader advertising campaign.

C. Hays (or Hays and Choi) in view of Chu does not render claim 4 obvious.

1) Claim 4

a) Hays does not teach or suggest “the step of sending information to the mobile communication device as part of the updated content, the information providing an in-game placement location associated with the updated video-game content.”

110. Petitioner and Dr. Zagal assert that Hays (or Hays and Choi) in combination with Chu render claim 4 obvious. I disagree. For the reasons I explain above, neither Hays alone nor Hays in combination with Choi render claim 1 obvious, and thus do not render claim 4 obvious. And the Hays-Choi-Chu combination fails to render claim 4 obvious for additional reasons.

111. More specifically, Petitioner and Dr. Zagal assert that Chu discloses “providing an in-game placement location” via Chu’s “location object[s].” I disagree.

112. Chu relates to an online gaming advertising system. Ex. 1007, Abstract. Chu describes a process in which clients request advertisements and provides that

“[w]hen requesting advertising metadata and schedules, game clients must pass the server information such as but not limited to the location identifiers that uniquely identify an ad within a game and any game specific environment variables such as object and character positioning and actions and game player profiles and skill set and experience level.” Ex. 1007, 14:30-35.

113. Claim 4 requires sending information from a server to a client. ’202 Patent, claim 4 (“comprising the step of *sending information to the mobile communication device* as part of the updated content, the information providing an in-game placement location associated with the updated video-game content”). However, a POSITA would understand that Chu only describes a method for providing information (the request) from the client to the server. *See* Ex. 1007, 14:31-33 (“*game clients must pass the server information* such as but not limited to *the location identifiers* that uniquely identify an ad within a game”); *id.*, 14:50-54 (“After an online game running on a game console or user computer (*client*) *requests advertising metadata and determines an ad campaign's display rules, schedule, and locations*, it requests the advertising assets that represent the advertisement.”). This is distinct from and opposite to providing the client information from the server, as required by claim 4.

2) No Motivation to Modify or Combine with Choi or Chu

114. A POSITA would not have found it obvious to modify Hays's system (nor the Hays-Choi combination) in light of the teachings of Chu.

115. First, neither the Petition nor Dr. Zagal provides any motivation to combine Choi and Chu, or Hays, Choi, and Chu. The Petition only alleges that a POSITA would have been motivated to combine Hays and Chu (and Hays and Choi). Thus, I only address this combination below.

116. In my opinion, a POSITA would not have been motivated to modify Hays to include Chu's teaching of a video game requesting "advertising metadata and schedules that determine what advertisements are to display in specified locations within the game," and in turn receiving advertisements that include "[a] location object (530, 630) [that] represents the location within a game at which advertisements are to appear." Petition at 37 (quoting Ex. 1007, 14:20-15:5); Ex. 1003, ¶ 146 (same).

117. First, a POSITA would not have been motivated to modify Hays to use Chu's teachings because the two references teach away from each other. Hays discloses placing ad units on items regardless of their location. *See, e.g.*, Ex. 1005, at [0073], ("In some embodiments, advertisement opportunities may be offered to advertisers based on standardized available ad units, which may include, for example signs (e.g., a billboard, poster, or other form of static sign ***regardless of its location***)

. . . .”); *see also id.* at [0074]-[0080]. Hays does not describe specific placements of advertisements in a game.

118. Even assuming Chu describes in-game placement location (it does not), a POSITA, looking at Hays which is agnostic as to the location of the advertisements, would not have sought to place an advertisement at a particular in-game location, as allegedly described in Chu. *Contra* Ex. 1003, ¶¶ 147-148. Hays is directed to an ad server with broad applicability in which the ad server can be applied across multiple gaming contexts, regardless of the game itself. Chu’s disclosure would have a very narrow applicability in Hays’s system as Chu’s ads are designed to be placed at particular locations. Hays teaches against such a narrow application. Thus, a POSITA would not have sought to modify Hays’s specific ad units to transmit placement information.

119. Further, a POSITA would not have been motivated to modify Hays’s system in light of Chu’s disclosures. *Contra* Ex. 1003, ¶ 149. Hays teaches a method of sending unspecified ad units to a client. Indeed, Hays criticizes designing ads for only a specific game placement (e.g., Ex. 1005, [0005]) and instead relates to broadcasting advertisements to many games. *See* Ex. 1005, Abstract (“An advertisement delivery scheme and associated facility provide targeted advertisements for multiple video games without advertisers having to specify specific game titles in which they would like their advertisements placed.”). In

contrast, Chu only relates to requests from the client, not communications from the server. Hays's system for delivering advertisements, regardless of the game and client system, operates in an opposite manner from the client-centric method disclosed in Chu.

120. As just noted, Hays and Chu operate in opposite manners. Hays describes a method for sending ad units while Chu only describes requests from the client. A POSITA would have understood that these systems operate based on how the content is sent or whether the content is pushed or pulled. Based on these technical differences, a POSITA would not have been motivated to modify Hays's systems in light of Chu's disclosures at the time of the invention.

121. A POSITA would not have been motivated to combine Hays (or Hays and Choi) with Chu, nor reasonably expected this proposed combination to succeed.

D. Hays (or Hays and Choi) in view of van Datta does not render claim 6 obvious.

1) Claim 6

a) Hays does not teach or suggest that “uploading updated video-game content to the mobile communication device further comprises displaying the video-game content within the game at a location based on user interaction.”

122. Petitioner and Dr. Zagal assert that Hays (or Hays and Choi) in combination with van Datta render claim 6 obvious. I disagree. For the reasons I explain above, neither Hays alone nor Hays in combination with Choi render claim

1 obvious, and thus do not render claim 6 obvious. The Hays-Choi-van Datta combination also fails to render claim 6 obvious for additional reasons.

123. Petitioner and Dr. Zagal assert that van Datta's tagging and inserting advertisements teaches "displaying the video-game content within the game at a location based on user interaction." I disagree.

124. Van Datta describes "[a] system and method for placing an advertisement in a digital environment based upon a user's choice, subject to certain predetermined parameters." Ex. 1009, Abstract. More specifically, van Datta explains that "[c]ertain objects in a digital medium such as a video game may be tagged, these tagged areas being subject to the insertion or placement of advertising content. For example, and as shown in FIG. 1A, the face of a billboard 100 may be 'tagged' (110) to indicate that an advertisement may be embedded in that location." Ex. 1009, 2:59-64; *see also id.* 5:62-6:2 (" . . . the user may select particular content for application to a vehicle as in the case of FIG. 3A. The user may similarly select advertisements for display on a uniform as is the case in FIG. 3B."), 7:55-8:9 ("The user may, in an embodiment of the present invention, drag and-drop an advertisement (such as may be displayed in advertisement preview window 430) into the particular advertising asset displayed in the environment window 440."), and 8:20-24 ("For example, a user may simply point-and-click or highlight and select a particular identifier 410 or group 420 and the appropriate collection of

advertisements will randomly be displayed in various tagged assets.”). A POSITA would understand that van Datta only describes placing advertisements at a location, but not that the location is based on a user interaction.

125. A POSITA would have understood that this is distinct from claim 6, which requires displaying the updated video-game content at a location based on user interaction. Claim 6 ties the location of the updated video-game content and displaying the updated video-game content to the user interaction, which van Datta fails to disclose.

126. Thus, van Datta does not describe or teach placing an advertisement at a particular location based on a user interaction.

2) No Motivation to Modify or Combine with Choi or van Datta

127. Petitioner asserts a POSITA would have been motivated to utilize van Datta’s user interactions in Hays’s advertisement server. Even assuming Van Datta discloses this step, van Datta discloses an entirely different process for a step of the ad serving process than Hays. Thus, a POSITA would not have sought to combine those two different processes which, instead, teach away from each other.

128. As explained above, Hays discloses specific ad units on items regardless of their location. *See, e.g.*, Ex. 1005, at [0073]; *see also id.* at [0074]-[0080]. In contrast, van Datta seeks to allow a user “to customize the environment or game.” Ex. 1003, ¶ 157 (quoting Ex. 1009, 1:56-59). A POSITA would not have

sought to modify Hays's system that provided ads regardless of the location of the ad to include custom ads. Indeed, such a modification would contradict Hays's intended purpose of delivering multiple ads into video games, regardless of the gaming environment. A POSITA would have not been motivated to narrow the audience of its advertising campaign through customized advertisements. Thus, a POSITA would not have been motivated to modify the advertising server of Hays in the manner described in van Datta.

129. Further, a POSITA would not been motivated to modify Hays's system in light of van Datta's disclosures. *Contra* Ex. 1003, ¶ 158. Hays teaches a method of sending unspecified ad units to a client. In contrast, van Datta relates to "a system and interface for allowing a user to customize the display of advertisements within a mobile video game, and provides detailed explanations for how to implement such systems," as Dr. Zagal agrees. Ex. 1003, ¶ 158. Hays's system for delivering advertisements, regardless of the game and client system, operates in an opposite manner from the user-centric method disclosed in van Datta. *See* Ex. 1005, Abstract ("An advertisement delivery scheme and associated facility provide targeted advertisements for multiple video games without advertisers having to specify specific game titles in which they would like their advertisements placed."). A POSITA would have been motivated to modify Hays's system to allow for modifications from a client and give a client control over the ad server.

130. More specifically, a POSITA would not have had the motivation or the capability to implement drag-and-drop interfaces into Hays's system. Hays's system is directed to "multiple video games *without advertisers having to specify specific game titles* in which they would like their advertisements placed." Ex. 1005, Abstract. A POSITA could have only designed drag-and-drop functionality based on a specific game title, which would have required an entirely different architecture than the system of Hays and, thus, a POSITA would not have sought to incorporate the functionality into the system of Hays.

E. Levkovitz does not render claims 1-3 nor claims 5-9 obvious.

1) Claim 1

a) Levkovitz does not teach or suggest the use of "updated video-game content" in "a mobile video game" "that already exists on the mobile communication device" "when the video game operates on the communications device."

131. Claim 1 requires "providing updated video-game content to a mobile communication device *for use* in a mobile video game" (claim 1[pre]), "the updated video-game content being *usable in the video game* that already exists on the mobile communication device" (claim 1[a]), and "the video-game content *being usable when the video game operates* on the communications device" (claim 1[c]). Levkovitz describes an ad server for placement of banner ads, and does not describe "updated video-game content" that is used "in a mobile video game" as required by these limitations of claim 1. *See, e.g.*, Ex. 1008, [0005] ("... contextual and/or non-

contextual placement of content, e.g., advertisements or banners, within an application executed by a cellular phone, a mobile phone, or other wireless communication device.”), [0090] (“. . . said advertisement may include a banner advertisement included in said WAP-page.”).

132. Levkovitz discloses “Devices, systems and methods of presentation of delivering targeted advertisements using Wireless Application Protocol,” (“WAP,” *i.e.*, a browser on a mobile device). Ex. 1008, Abstract. The invention of Levkovitz purports to improve prior systems “in which content is downloaded to or uploaded from the wireless device, [which] may consume system resources and bandwidth resources, and may require a user to pay a fee to cover the cost of using such resources.” Ex. 1008, [0003]; *see also id.* at [0002] (providing those prior systems “allow a wireless communication device to download and use games and applications”). Levkovitz sought to solve this problem using WAP, in which “[t]he content client may periodically connect to a content server or ad server and request content. The ad server may selectively serve content items to the content client, based on parameters related to the mobile phone.” *Id.* at [0006].

133. A POSITA would understand the advertisements described in Levkovitz are not “for use” or “usable” in the mobile video game and are instead agnostic to the game environment. Levkovitz explicitly describes “serv[ing] content items directed for presentation” Ex. 1008, [0127]; *see also id.* at [0363] (“In

some embodiments, advertisements delivered using WAP to device 1501 may include, for example, textual content, audio content, graphic content, video content, informational items, coupons, promotion items, banner, banner ads, or the like.”). A POSITA would understand that this simply teaches the placement or presentation of content such as banner ads within the game, which are not “for use” or “usable” in the mobile video game as the claim requires.

134. Additionally, I have reviewed the prosecution history of the ’202 Patent. It is my opinion that a POSITA would find Hays analogous to prior art that the applicant argued over and overcame during prosecution.

135. More specifically, and as discussed above, the applicant overcame a rejection based on Gatto, and did so by distinguishing Gatto’s items available for download via a hyperlink because Gatto’s items were not usable in the game. Ex. 1002 at 188 (“There is no indication that these promotional items are ‘usable in the video game.’ Indeed, it would not make sense for an email to provide hyperlinks for content that is usable in the email itself.”); *id.* at 189 (“the Examiner fails to address the remaining claim language of this element-namely, whether this content is ‘usable in the video game that already exists on the mobile communication device.’ A close reading of Gatto reveals that the ‘hyperlinks to download promotional items’ are, in fact, not usable in the so-called video game.”).

136. During prosecution, the Applicant clearly distinguished the “hyperlink” in Gatto from the claimed “updated video-game content” and “content that would be ‘usable in’ the email ticket or a ‘video game’ itself, as opposed to a separate application program.” *Id.* at 166. The Applicant explained that Gatto “does not teach or suggest any updated content that is ‘useable in’ a video game,” (*id.* at 142) and, instead, “[t]he available hyperlink ... causes the download of an entirely separate program or Internet page.” *Id.* As noted, the examiner withdrew this portion of the rejection in response.

137. A POSITA would understand that hyperlinks are akin to data provided by an advertisement server via WAP and distinct from updating video-game content in a mobile video game that already exists and has been downloaded on the mobile communication device. This is consistent with my description of the state of the art as described above. Indeed, a POSITA would have understood the technical distinctions between browser-based games and advertisements provided via a server and gaming applications that are downloaded on a mobile device.

138. A POSITA would understand that Levkovitz discloses a browser-based ad server such as a WAP-based system, which functions in terms of a user’s access to an ad much like the hyperlink in Gatto, which the Applicant distinguished during prosecution.

139. The additional paragraphs of Levkovitz that Petitioner and Dr. Zagal cite do not change this understanding. *See* Ex. 1008, [00175] (“a PDA device which incorporates a mobile phone, a cordless phone, a portable phone, a Digital Enhanced Cordless Telecommunications (DECT) phone or device, an Instant Messaging (IM) terminal or device, or other suitable devices.”), [0123] (“In accordance with some embodiments of the invention, device 170 may include an application 176 having a content client 174. The application 176 may be, for example, a game or a software application. The content client 174 may be a module of application 176, a plug-in of application 176, or an external module operatively associated application 176.”). A POSITA would understand that these further describe a browser-based application on a mobile phone. *See* Ex. 1008, [0340] (“For example, in system 100 of FIG. 1, device 170 may include a WAP browser or micro-browser able to present WAP-sites, WAP-pages and/or WAP content; for example, the WAP browser may be embedded in device 170, may be a download-able or install able module or application, may be implemented using hardware components and/or software components, and/or may otherwise be included in device 170 of FIG. 1.”).

140. Neither Petitioner nor its expert provides any analysis or explanation of how Levkovitz might be modified under the knowledge of one of skill in the art to show how the ads could be “usable” in the game, nor how browser-based advertisement server method could be applied to an application that is not browser

or WAP-based. Nor could they, as Levkovitz has claimed to solve a distinct problem by avoiding downloading content onto a client device given high data costs. A POSITA would, thus, not be motivated to modify Levkovitz's ad server to achieve the claimed solution of the '202 Patent, nor have a reasonable expectation of success in doing so.

***b) Levkovitz does not teach or suggest the use of “uploading updated video-game content to the communications device
....”***

141. In addition to the reasons provided above, Levkovitz does not teach or suggest claim 1 because Levkovitz does not describe the “uploading” step of claim 1[c]. '202 Patent, claim 1[c].

142. As described above, Levkovitz discloses an ad server which uses “Wireless Application Protocol” (WAP) (*i.e.*, a browser on a mobile device). Ex. 1008, Abstract. The ad server of Levkovitz does not upload data to a mobile device (or any user device) in WAP Protocols. *See, e.g.*, Ex. 1008, Fig. 7. Instead, a POSITA would understand that WAP systems operate like a web browser.

143. In a WAP system, a server (and the client devices) retrieves and caches content but does not require downloading or uploading content. Levkovitz instead explains that “[prior art] operations, in which content is downloaded to or uploaded from the wireless device, may consume system resources and bandwidth resources, and may require a user to pay a fee to cover the cost of using such resources.” Ex.

1008, [0003]. Levkovitz attempts to solve this problem by avoiding uploading or downloading content and, thus, teaches away from systems that require uploading content. A POSITA would have understood that Levkovitz consumes less resources, by not uploading content. *See id.*

144. Levkovitz does not render claim 1 obvious, and for the same reasons, does not render claims 2-3 and 7-9 obvious. Claims 5 and 6 are also not obvious for additional reasons.

2) Claim 5

a) Levkovitz does not teach or suggest “the step of tracking what has been uploaded to the mobile communication device.”

145. Levkovitz discloses a WAP-based ad server. *See* Ex. 1008, Abstract. Specifically, Levkovitz describes logging what content has been presented or what presentations have been performed by the WAP-based ad server. Ex. 1008, [0132]. Levkovitz’s “[d]evice 170 may store or otherwise log information related to presentations performed by device 170, e.g., data indicating the content item(s) presented, data the starting time and/or ending time of the presentations, data indicating operations performed by device 170 and/or the user of device 170 during or after the presentation (e.g., pressing a button, dialing, sending a SMS or MMS message, placing a call, or the like).” *Id.* Levkovitz, thus, stores or logs information

(i.e., advertisements) that have been shown to a device via a WAP-based server. *See id.*

146. A POSITA would understand that advertisements would be presented but not uploaded when serving advertisements through a WAP-site, as shown in the figures of Levovitz. *See, e.g.*, Ex. 1008, Fig. 7. A POSITA would understand data is not uploaded to the mobile device when data is served via WAP-protocols. In contrast to an application, WAP operates like a web browser. A WAP-based site retrieves and caches content, but it does not download or upload data to the device, like an application does.

147. Thus, a POSITA would understand that Levkovitz teaches away from “uploading” content to the mobile communications device as required by claim 5, let alone tracking any uploaded content. As Levkovitz explains “[prior art] operations, in which content is downloaded to or uploaded from the wireless device,” like an application “may consume system resources and bandwidth resources, and may require a user to pay a fee to cover the cost of using such resources.” Ex. 1008, [0003]. Levkovitz attempts to solve this problem, and consume *less* resources, by not uploading (or downloading) content. Thus, Levkovitz operates in a manner opposite from claim 5.

148. Because of this distinction, Levkovitz does not teach or suggest “the step of tracking what has been uploaded to the mobile communication device.”

3) Claim 6

a) Levkovitz does not teach or suggest that “uploading updated video-game content to the mobile communication device further comprises displaying the video-game content within the game at a location based on user interaction.”

149. Claim 6 adds the requirement that the step of “uploading updated video-game content to the mobile communication device further comprises displaying the video-game content within the game at a location based on user interaction.” ’202 Patent, claim 6. Petitioner asserts that Levkovitz’s “presentation rules” disclose this limitation. I disagree.

150. A POSITA would understand that these rules dictate when an advertisement is presented and the size of the advertisement that is presented. Ex. 1008, [0187] (“presentation rule[s]” requiring presentation of content items “within a pre-defined time period” or “having a [specified] size”). These “presentation rules” are not related to a location of the content, nor are any other disclosures in Levkovitz. More importantly, the “presentation rules” do not display the content “at a location based on user interaction,” as required by the claim. At most, Levkovitz discusses that content may be triggered based on a period of inactivity (Ex. 1008, [0187]), but this relates to a time without activity, and does not address “displaying the video-game content ***within the game at a location based on user interaction.***” A POSITA would understand that the presentation rules are not based on a user interaction and that the presentation is also not related to any location.

151. Petitioner also alleges that Levkovitz's disclosure of presenting an advertisement "in response to a first triggering event" is "based on a user interaction" and thus allegedly meets this element. Petition at 50 (quoting Ex. 1008, [0318]). This fails for the same reasons as described above with respect to Hays. I do not believe Levkovitz displays an advertisement based on an interaction, but even assuming it does, Levkovitz does not describe "displaying the video-game content within the game *at a location* based on user interaction." Moreover, Petitioner does not even attempt to tie this disclosure to displaying content at a location. Petitioner cites the declaration of Dr. Zagal (Petition at 49-50 (citing Ex. 1003, ¶ 179), but Dr. Zagal does not explain how this claim would have been obvious. And it would not have been.

152. A POSITA would not have sought to make multiple changes to Levkovitz. Specifically, a POSITA would not have sought to display an advertisement based on a user interaction because Levkovitz does not teach or disclose doing so and instead teaches away from the claimed invention. Further, a POSITA would not have sought to display an advertisement at a particular location *based on* a user interaction when Levkovitz does not describe providing any advertisement at a location. Both of these aspects are absent from Levkovitz.

153. Because Levkovitz fails to teach or suggest “displaying the video-game content within the game *at a location* based on user interaction,” Levkovitz fails to render obvious claim 6.

F. Levkovitz in view of Chu does not render claim 4 obvious.

1) Claim 4

a) Levkovitz does not teach or suggest “the step of sending information to the mobile communication device as part of the updated content, the information providing an in-game placement location associated with the updated video-game content.”

154. Petitioner and Dr. Zagal assert that Levkovitz in view of Chu renders claim 4 obvious. I disagree. For the reasons I explain above, Levkovitz alone does not render claim 1 obvious, and thus does not render claim 4 obvious. And the Levkovitz-Chu combination fails to render claim 4 obvious for additional reasons.

155. More specifically, Petitioner and Dr. Zagal assert that Chu discloses “providing an in-game placement location” via Chu’s “location object[s].” Ex. 1003, ¶ 190. I disagree. As noted above, claim 4 requires that a server send “information to the mobile communication device as part of the updated video-game content.”

156. Chu relates to an online gaming advertising system. Ex. 1007, Abstract. Chu describes a process in which clients request advertisements and provides that “[w]hen requesting advertising metadata and schedules, game clients must pass the server information such as but not limited to the location identifiers that uniquely

identify an ad within a game and any game specific environment variables such as object and character positioning and actions and game player profiles and skill set and experience level.” Ex. 1007, 14:30-35. A POSITA would understand, however, that Chu only describes a method for providing information (the request) from the client to the server. *See* Ex. 1007, 14:31-33 (“***game clients must pass the server information*** such as but not limited to ***the location identifiers*** that uniquely identify an ad within a game”); *id.*, 14:50-54 (“After an online game running on a game console or user computer (***client***) ***requests advertising metadata and determines an ad campaign's display rules, schedule, and locations***, it requests the advertising assets that represent the advertisement.”).

157. Chu’s method is distinct from providing the client information ***from the server***, as required by claim 4.

2) No Motivation to Modify or Combine with Chu

158. Petitioner and Dr. Zagal assert that a POSITA would have been motivated to modify the ad server of Levkovitz to “include Chu’s teaching of a video game requesting ‘advertising metadata and schedules that determine what advertisements are to display in specified locations within the game.’” Petition at 52; *see also* Ex. 1003, ¶¶ 183, 185. Petitioner further asserts that this would result in “receiving advertisements that include ‘[a] location object (530, 630) [that]

represents the location within a game at which advertisements are to appear.””
Petition at 52 (quoting Ex. 1007, 14:20-15:5) (alternation in original).

159. However, in my opinion, a POSITA would not “have been motivated to use Chu’s teachings of the server providing to the client the specific in-game locations of advertisements because of the well-known benefits of being able to display advertisements at in-game locations.” Ex. 1003, ¶ 186. Levkovitz does not describe specific placement of an advertisement, let alone an in-game placements of an advertisement. Levkovitz describes ad banners—“noncontextual placement of content,” or advertisements. Ex. 1008, [0005].

160. Even assuming Chu describes in-game placement location (it does not), a POSITA, looking at Levkovitz which is agnostic as to the location of the advertisements, would not have sought to place an advertisement at a particular in-game location, as allegedly described in Chu. *Contra* Ex. 1003, ¶¶ 186-187. Levkovitz is directed to an ad server with broad applicability in which the ad banners can be applied across multiple gaming applications. Chu’s disclosure would have a very narrow applicability as Chu’s ads are designed to be placed at particular locations. Levkovitz teaches against such a narrow application.

161. Further, a POSITA would not have been motivated to modify Levkovitz’s system in light of Chu’s disclosures. *Contra* Ex. 1003, ¶ 188. Levkovitz describes a method for presenting advertisements from a server to a client device.

Chu, however, describes a method in which information is provided from the client to the server. Ex. 1007, 14:31-33 (“game clients must pass the server information such as but not limited to the location identifiers that uniquely identify an ad within a game”).

162. Levkovitz’s teaching of delivering targeted advertisements is opposite from Chu’s client-based system. Levkovitz relates to the server sending specified ads while Chu only relates information sent from the client to the server, not communications from the server to the client.

163. Further, Levkovitz describes an advertisement campaign that can be applied in a broad manner with ad banners that are not specific to any game or application. A POSITA would be motivated to maintain this breadth that could allow for increased ad activity and, in turn, revenues from ads. A POSITA would not have sought to add Chu’s disclosure of customizing ads and placing ads at a particular location in a game (which would still not achieve the claim as I explain above). Thus, a POSITA would not have been motivated to combine Levkovitz and Chu.

G. Levkovitz in view of van Datta does not render claim 6 obvious.

1) Claim 6

a) Levkovitz does not teach or suggest that “uploading updated video-game content to the mobile communication device further comprises displaying the video-game content within the game at a location based on user interaction.”

164. Petitioner and Dr. Zagal assert that Levkovitz in view of van Datta renders claim 6 obvious. I disagree. For the reasons I explain above, Levkovitz does not render claim 1 obvious, and thus does not render claim 6 obvious. Van Datta does not cure this deficiency.

165. Petitioner and Dr. Zagal assert that van Datta's tagging and inserting advertisements teaches "displaying the video-game content within the game at a location based on user interaction." Ex. 1003, ¶ 199. I disagree.

166. Van Datta describes "[a] system and method for placing an advertisement in a digital environment based upon a user's choice, subject to certain predetermined parameters." Ex. 1009, Abstract. More specifically, van Datta explains that "[c]ertain objects in a digital medium such as a video game may be tagged, these tagged areas being subject to the insertion or placement of advertising content. For example, and as shown in FIG. 1A, the face of a billboard 100 may be 'tagged' (110) to indicate that an advertisement may be embedded in that location." Ex. 1009, 2:59-64; *see also id.* 5:62-6:2 (" . . . the user may select particular content for application to a vehicle as in the case of FIG. 3A. The user may similarly select advertisements for display on a uniform as is the case in FIG. 3B."), 7:55-8:9 ("The user may, in an embodiment of the present invention, drag and-drop an advertisement (such as may be displayed in advertisement preview window 430) into the particular advertising asset displayed in the environment window 440."),

and 8:20-24 (“For example, a user may simply point-and-click or highlight and select a particular identifier 410 or group 420 and the appropriate collection of advertisements will randomly be displayed in various tagged assets.”). A POSITA would understand that van Datta at most describes an advertisement server in which a user can assign advertisements to certain areas of a game. But to the extent van Datta discloses placing advertisements at a location, it does not disclose “uploading updated video-game content to the communications device, the video-game content being usable when the video game operates on the communications device” and “displaying the video-game content within the game at a location *based on user interaction*.” A POSITA would have understood that this is distinct from claim 6, which requires displaying the updated video-game content at a location based on user interaction. Claim 6 connects the location of the updated video-game content and the display of the updated video-game content to the user interaction, which van Datta does not disclose. *See* ’202 patent, claim 6; *see also id.* at 7:49-57, 12:51-56.

167. Thus, van Datta does not describe or teach placing an advertisement at a particular location based on a user interaction.

2) No Motivation to Modify or Combine with van Datta

168. As discussed above, Levkovitz relates to an ad server for displaying advertisements while the user is playing a WAP-based game. In contrast, van Datta describes a system for a designer to select the locations for placement of

advertisements. These two systems are inherently in contrast, because the “user” of Levkovitz is the person playing the game. By contrast, the user of van Datta is the person selecting placements for advertisements that are displayed to the player. A POSITA would not combine these two systems because it would not make sense to have the player of a game select the placement location of advertisements that the same game player will later view.

IX. Petitioner’s Technology Background and Secondary Considerations of Non-Obviousness

169. I have reviewed the Petitioner’s “Technology Background” and disagree with many of the statements therein as provided below. Contrary to Petitioner’s suggestion, in my opinion there was both (1) a long felt-need for the claimed invention in the art, and (2) the prior art also taught away from the claimed invention of the ’202 Patent.

170. The Petition states that “[a]lthough mobile game development posed some unique challenges, hardware manufacturers and software developers quickly adapted to meet these changes.” Petition at 6. I disagree. As explained above, and as the Petition acknowledges, developers were siloed, and mobile game development was not mainstream. The developers and service providers each operated and developed games in accordance with their own technology and platforms. Petition at 6 (discussion platforms specific to graphics and handset providers). The platforms were not unified nor universal, which hindered mobile game development. This led

to short life cycles of games, as evidence cited by Petitioner recognizes. *See, e.g.*, Ex. 1018 at 52 (“A life cycle of a certain game will quite short, and will be replaced by more trendy games very promptly.”).

171. The Petition also states that “[g]ame developers embraced the idea of updateable games even before mobile games became popular.” Petition at 7. I disagree. In my opinion the prior art also taught away from the claimed invention of the ’202 Patent. As noted above, partial game updates were available on other video game platforms (console games or desktop computer games). But such updates were not available for mobile video games played on mobile devices at the time. As discussed in Section VII above, at this time mobile broadband was not available and mobile devices had limited processing and data storage capacity. Thus, developers did not provide updates to these games once installed, except for full game updates requiring another download of the entire application. The evidence that Petitioner relies on does not indicate otherwise.

172. Petitioner cites to a book titled “MOBILE GAMING: A Framework for Evaluating the Industry 2000-2005” (Ex. 1018) for the contention that Nokia allowed members to download new levels for games. Petition at 7. But Ex. 1018 does not support that proposition. Ex. 1018 shows that users still had to download the entire game application to get new games or versions of the game. Ex. 1018 at

52 (“Exclusive membership allows Nokia 3330 owners to download a totally new game 'Bumper' or new game packs for Space Impact and Snake II.”).

173. Petitioner also asserts that “a number of different advertising companies offered in-game advertising networks that allowed game developers to incorporate dynamic ads from third parties into their games, including mobile games.” Petition at 7. As discussed above, this is incorrect. Ad servers were available for console and PC-based games, but were not available for mobile devices. This is confirmed by the very papers cited by Petitioner. Indeed, Ex. 1016, for example, states that “advertisers should experiment with in-game advertising to gain skills that could become vital in the *near future*.” Ex. 1016 at 2 (emphasis added). This confirms that in-game advertising (or other updates to video game content) were not available for mobile phone games at the time of invention of the ’202 Patent.

174. Likewise, Ex. 1017 is also forward looking and provides that “[i]n the *near future*, mobile in-game advertising *will become* increasingly attractive for providers of mobile phones.” Ex. 1017 at 1 (emphasis added). Again, this does not support Petitioner’s contention that in-game advertising was available at the time of invention.

175. This evidence, instead, shows that there was a need for providing updated video-game content to video games on mobile devices, but it was not yet available. See Ex. 1015 at 1 (providing that “suggestive events for the future of

online gaming took place in the [Australian] spring of 2007”); Ex. 1016 at 2 (suggesting that “advertisers should experiment with in-game advertising to gain skills that could become vital in the near future”); Ex. 1017 at 1 (“In the near future, mobile in-game advertising will become increasingly attractive for providers of mobile phones.”); Ex. 1018 at 50 (“The biggest change between the current game technologies and the future ones is that in the future it will be possible to offer also games with real-time interactivity.”); *id.* at 52 (“A life cycle of a certain game will quite short, and will be replaced by more trendy games very promptly.”).

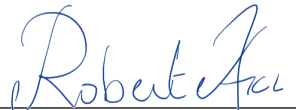
176. Thus, in my opinion there was both (1) a long felt-need for the claimed invention in the art, and (2) the prior art also taught away from the claimed invention of the '202 Patent.

X. Conclusion

177. For the reasons I explain above, none of the claims of the '202 Patent is rendered obvious by the prior art at issue.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements are made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code.

Executed on July 23, 2024 in Dallas, Texas.



Dr. Robert Akl, D.Sc.